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ARIZONA STATE UNIVERSITY ■ COLLEGE OF BUSINESS
CENTER FOR BUSINESS RESEARCH

Valley Inflation Moderates in Third Quarter

Inflation in the Phoenix metropolitan area slowed to a seasonally adjusted 0.9 percent rate during third quarter 1988, down from a 1.3 percent rate in the second quarter. The third quarter's rate was similar to those recorded between second quarter 1987 and first quarter 1988 (see Table 1).

Before seasonal adjustment, the Metropolitan Phoenix Consumer Price Index rose only 0.8 percent, much less than the second quarter's 2.1 percent advance. The third quarter 1988 index was 120.9 (1982-84 = 100), 4.1 percent higher than in third quarter 1987.

The third quarter's inflation rate was lower than anticipated. Even if inflation during the fourth quarter returns to the second quarter's 1.3 percent seasonally adjusted rate, the annual average rate for 1988 will be no higher than in 1987. Fears of higher inflation in the near term appear to have been overblown.

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COMPONENT INDEXES

Despite its minor relative importance, the category of apparel and upkeep contributed as much to the overall inflation rate as the more heavily weighted categories of housing, transportation, and food and beverages. Moderate inflation was measured during the third quarter in each of the other major categories.

Food and Beverages

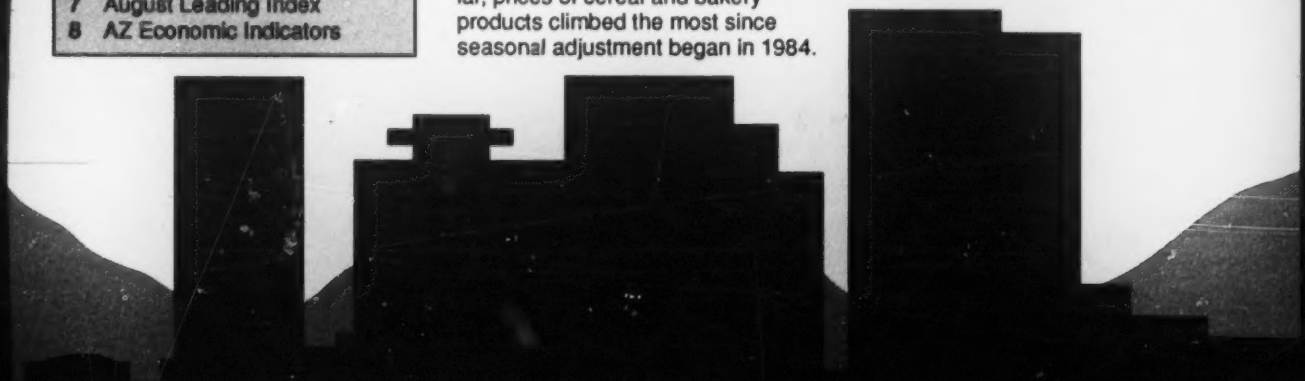
Though the third quarter's inflation rate was less than in the second quarter, it was higher than in each of the six quarters between late 1986 and early 1988. The summer's drought appears to have had an effect on food at home prices, which rose more than prices of food away from home (see Table 2). In particular, prices of cereal and bakery products climbed the most since seasonal adjustment began in 1984. Mostly because of jumps in prices of eggs and poultry, inflation in the meats, poultry, fish and eggs category was relatively high for the second straight quarter.

Housing

Housing inflation remained modest during the third quarter. After some increases last winter, apartment rents resumed their decline as the market remains plagued by overbuilding and weak demand. Similarly, homeowners' costs have been rising modestly. Thus, shelter costs, which make up 28 percent of the CPI, continue to hold down the area's inflation rate, a result of weak population and economic growth.

Transportation

Transportation inflation again was moderate during third quarter 1988; the increase over third quarter 1987 was only 1.2 percent. Public transportation costs plunged, offsetting the second quarter's large gain. Declining prices also were measured for used cars, automobile parts



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and equipment, and automobile maintenance and repair. Price gains were recorded for new cars, gasoline and automobile insurance.

Medical Care

Health care costs barely rose during the third quarter. Except during second quarter 1988, this category has registered little change since the first half of 1987. Prescription drug prices declined in the third quarter by the most in years while rates for professional medical services and hospital and related services hardly advanced; the latter's increase was the smallest since early 1985.

Other Categories

Apparel and upkeep costs jumped for the third consecutive quarter and fifth time in six quarters. The annual increase through third quarter 1988 was 8.5 percent, with double-digit rates measured for women's apparel, girls' apparel, footwear and infants' apparel. The indexes for entertainment and other goods and services went up modestly.

COMPARISON AREAS

Before seasonal adjustment, inflation in the Phoenix area was lower than the national average in the third quarter (see Table 3). In each major category except apparel and upkeep, the Phoenix area rate was less than or equal to the national average.

During the year ending third quarter 1988, inflation in the Phoenix area was nearly equivalent to the national average. After experiencing higher inflation during the boom years of 1984-85, Phoenix area inflation has tracked the national average.

OUTLOOK

With only one quarter of the year remaining, the 1988 annual average rate of inflation in the Phoenix area is unlikely to be much different from 4 percent, about equal to the 1987 rate and the rate predicted for 1988 at the beginning of the year. Some acceleration in the inflation rate seems likely for 1989, with year-over-year rates briefly exceeding 5 percent before settling at between 4.5 and 5 percent. The sluggish economy, however, may hold rates near those of 1987 and 1988.

– **Tom R. Rex**
Research Manager

TABLE 1
PERCENT CHANGES IN
METROPOLITAN PHOENIX CONSUMER PRICE INDEX

		Seasonally Adjusted from Preceding Quarter						
Expenditure Category	*Relative Importance*	*1st 1987*	*2nd 1987*	*3rd 1987*	*4th 1987*	*1st 1988*	*2nd 1988*	*3rd 1988*
ALL ITEMS	100.0	2.1	1.1	0.7	0.9	0.8	1.3	0.9
Food and Beverages	16.4	-0.2	0.5	0.9	0.6	0.9	2.0	1.3
Housing	42.4	0.5	0.2	0.5	2.3	1.0	0.2	0.4
Apparel and Upkeep	5.8	-2.6	2.8	2.7	0.3	2.3	2.9	3.6
Transportation	19.1	5.1	3.0	0.9	-2.0	-0.5	2.4	1.0
Medical Care	6.7	1.8	2.7	-2.1	0.9	0.3	3.3	0.4
Entertainment	4.6	2.4	-1.2	2.0	3.1	1.2	0.1	1.2
Other Goods and Services	5.0	2.0	0.3	2.9	0.6	2.2	0.9	0.8

TABLE 2
METROPOLITAN PHOENIX CONSUMER PRICE INDEX
Third Quarter 1988

	Index (1982-84 = 100)		Percent Change from	
Expenditure Category	*Last Quarter*	*This Quarter*	*Last Quarter**	*Year-Ago Quarter*
ALL ITEMS	119.9	120.9	0.9	4.1
Food and Beverages	119.3	120.4	1.3	4.7
Food	118.2	119.3	1.6	4.1
Food at Home	119.7	121.1	1.8	5.0
Cereal and Bakery Products	131.3	138.3	6.1	10.3
Meats, Poultry, Fish, and Eggs	111.5	114.6	2.2	5.8
Dairy Products	113.1	112.0	-0.3	2.4
Fruits and Vegetables	146.3	146.7	3.0	17.8
Other Food at Home	112.4	112.4	0.1	-2.8
Food Away from Home	116.7	117.4	1.2	3.5
Housing	115.5	116.9	0.4	4.5
Shelter	115.0	115.8	0.3	2.8
Renters' Costs**	119.1	118.7	-1.2	1.8
Homeowners' Costs**	117.2	118.3	0.9	3.3
Fuel and Other Utilities	120.5	122.7	0.0	8.6
Gas (piped) and Electricity	116.1	125.9	4.7	12.4
Household Furnishings/Operations	113.0	115.6	1.8	5.8
Apparel and Upkeep	119.3	120.7	3.6	8.5
Transportation	117.1	117.2	1.0	1.2
Private Transportation	116.5	118.1	2.7	1.7
New and Used Cars	125.6	130.3	.8	7.0
Motor Fuels	76.4	77.2	7.2	-9.1
Public Transportation	116.2	107.0	-8.3	-0.7
Medical Care	146.0	147.0	0.4	5.3
Entertainment	138.6	139.7	1.2	8.8
Other Goods and Services	132.1	133.4	0.8	4.4

*Seasonally adjusted
**Base period is second quarter 1983.

TABLE 3
METROPOLITAN PHOENIX AND UNITED STATES
CONSUMER PRICE INDEXES
Third Quarter 1988

	Percent Change from Last Quarter*		Percent Change from One Year Ago	
Expenditure Category	*Phoenix*	*United States*	*Phoenix*	*United States*
ALL ITEMS	0.8	1.3	4.1	4.0
Food and Beverages	0.9	2.0	4.7	4.9
Housing	1.2	1.5	4.5	3.6
Apparel and Upkeep	0.6	-3.2	8.5	2.9
Transportation	0.1	1.4	1.2	2.9
Medical Care	0.7	1.8	5.3	6.8
Entertainment	0.8	0.8	8.8	4.4
Other Goods and Services	1.0	1.8	4.4	7.0

*Not seasonally adjusted

Source (Tables 1-3): Metropolitan Phoenix data compiled by the Center for Business Research, College of Business, Arizona State University, in co-sponsorship with Valley National Bank; other data are from the U.S. Department of Labor, Bureau of Labor Statistics.

Accuracy of Population Predictions Has Been Cyclical

Projections of the Arizona, Phoenix area and Tucson area populations during the past 30 years have alternated every few years from too high to too low, with occasional periods of accuracy in between. Thus, the perception that population gains have consistently been underprojected—an explanation offered for the much higher official projections since late 1986—does not appear to be accurate.

The periodicity of projection accuracy largely relates to the sharp cyclicality in population flows and economic growth. Throughout the last 30 years, the most recent performance tended not to be viewed as strictly cyclical behavior, but was weighted too heavily and extended throughout the projection period.

Over time, the population projections have been slightly low for Maricopa County and barely above actual growth for the state as a whole. However, Pima County's population growth has been overprojected on average.

A HISTORY OF CYCLES

In the mid-1950s, the population in Arizona, especially in its metropolitan areas, grew much faster than at any time in its history. This rapid growth, however, had only begun a few years earlier, and thus was not ingrained in the psyche of the community. Population projections made at this time turned out to be relatively accurate for Pima County and rural Arizona, but some 10 to 15 percent too low for Maricopa County (see Figure I).

By 1960, rapid growth had been experienced for more than a decade. Optimism swept across Arizona, reflected not only in population projections, but in other aspects of decision making. Home building, for example, shot up in the early 1960s. Population projections made during the first half of the 1960s turned out to be 20 to 30 percent too high for both Pima and Maricopa counties. Rural growth prospects were more accurately assessed.

The optimism of the early 1960s led to overbuilding. Soaring vacancy rates caused the construction industry in 1963 to enter a three- to five-year-long down cycle. A slow local economy and less national migration — due to a decrease in the number of young adults — resulted in much lower population gains in Arizona during the mid-1960s.

A downward revision in the population projections resulted. In one year, projections went from 20 to 30 percent too high to accurate. But as slow growth persisted until 1969, further downward revisions in the projections occurred. By 1970, the forecasts were too low, by roughly 10 percent for the urban areas to nearly 20 percent for rural Arizona.

During the early 1970s, all of Arizona experienced a boom, one that never has been repeated outside the Phoenix area. The pessimism of the population projections disappeared. For a few years in the mid-1970s, projections were amazingly accurate for all areas of the state.

The deep, long recession of the mid-1970s hit the Phoenix area particularly hard. This was reflected in the population projections of the mid- to late-1970s, which were about 10 percent too low for the Phoenix area, but only slightly low for the Tucson area and quite accurate for non-urban Arizona.

Improved economic conditions in the late 1970s led to higher and more accurate forecasts across the state in the early 1980s, though the Phoenix area's growth continued to be slightly underprojected while projected gains in the Tucson area were slightly too high.

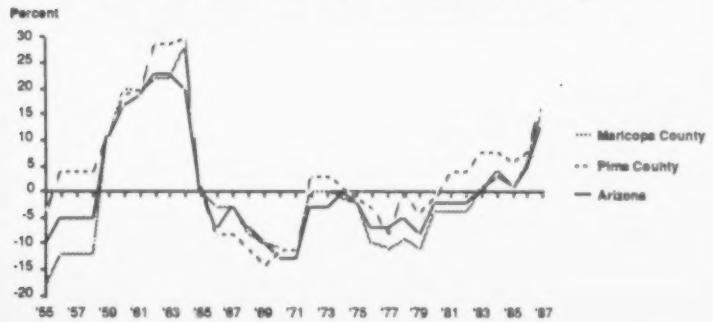
A boom — mostly in the urban areas — began in the early 1980s, led by commercial construction before the 1981-82 recession had ended. Like the episode nearly 25 years earlier, optimism swept the urban areas and construction boomed. Population projections became more optimistic. Though the long-term accuracy of these forecasts cannot yet be ascertained, the error for the urban areas may be on the magnitude of 15 percent too high. An error of this size (in either direction) was exceeded historically only in the early 1960s. The error for rural Arizona probably will turn out to be only about 5 percent.

Just as in the early 1960s, the 1980s construction boom led to high vacancy rates, which contributed to a construction decline beginning in 1986. Population and economic growth have been much slower for nearly two years, and near-term population projections are being revised substantially down to reflect these conditions.

A new series of official population projections — probably much lower than the prior series — will be released in 1989. As the current economic slump — a cyclical, not a long-term, phenomenon — continues for perhaps another three or four years, the community and its population projectors should not become too pessimistic about the long-term growth prospects.

– **Tom R. Rex**
Research Manager

FIGURE I
APPROXIMATE PERCENT ERROR IN PROJECTIONS OF POPULATION FIVE TO TEN YEARS IN FUTURE



Source: Center for Business Research, College of Business, Arizona State University. The past projections came from a variety of sources, including the *Arizona Statistical Review* published annually by Valley National Bank. Percent errors after 1980 are estimated.

Standard of Living Subpar Through Most of Arizona

The standard of living in the Phoenix metropolitan area is near the national average for large urban areas, but living standards throughout the rest of Arizona are substantially below the average of comparably sized places. This article updates cost of living, income and standard of living information last presented in the November 1987 issue of *Arizona Business*.

NATIONAL RELATIONSHIPS

Cost of Living

Living costs vary geographically. Significantly higher costs are found in the Northeast and along the Pacific coast, while significantly lower costs are enjoyed in the Southeast and in the Great Plains states (see Table 1). Costs in the Mountain region, which includes Arizona, are near the national average. Relative to the rest of the nation, living costs were higher in the Northeast in 1987 than in 1986.

The cost of living has a direct relationship to the population of a place; metropolitan areas of at least one million residents endure significantly higher costs and towns with fewer than 75,000 inhabitants experience significantly lower costs.

An area's cost of living can be predicted relatively accurately by examining its 1980 population, geographic location, latest median income and 1980 median home value. In most of the nation, predicted values closely match the actual cost of living reported by the American Chamber of Commerce Researchers Association (ACCRA). In much of Arizona, however, the cost of living is higher than expected from the values of these indicators. The neighboring states of New Mexico and Nevada also have higher than expected costs but the northern Rocky Mountain and northwestern states have lower than predicted costs. The only other states with living costs much different than anticipated are Alaska and Michigan (higher) and West Virginia (lower).

TABLE 1
MEDIAN LIVING COST INDEXES
By Geographic Area, Population of Urbanized Area, and Income
(National Median = 100)

Area	Index
New England	121*
Middle Atlantic	106
South Atlantic	100
East South Central	96*
West South Central	98
East North Central	99
West North Central	95*
Mountain	99
Pacific	116*
Population	
Less than 25,000	96*
25,000-74,999	97*
75,000-124,999	98
125,000-199,999	99
200,000-399,999	99
400,000-999,999	102
1 million or more	112*
Income	
Less than $21,500	96*
$21,500-$23,999	97*
$24,000-$27,499	100
$27,500 or more	105*

*Statistically significant difference from the national average.

Source: Center for Business Research, College of Business, Arizona State University, based on 1980 Census population figures, 1987 *Sales and Marketing Management* household disposable income figures, and 1987 data of the American Chamber of Commerce Researchers Association (ACCRA).

Income Levels

Median household disposable income figures are correlated with living costs; they also vary directly with population in the same manner as living costs (see Table 2). Incomes vary geographically as well, but not in the same pattern as the cost of living. Significantly lower incomes are found in the South Central states; this relationship occurred in the West South Central region for the first time in 1987. Significantly higher incomes are measured in the Middle Atlantic and Great Lakes states.

Standard of Living

Calculating the ratio of income to the cost-of-living index creates a measure of the standard of living. This adjustment greatly reduces the variations in income, though significant differences remain. Living standards also increase with the population, ranging from 6 percent less than the national average in small towns to 10 percent more in large urban areas. Geographically, adjusted income ranges from 10

TABLE 2
MEDIAN HOUSEHOLD INCOME WITH AND WITHOUT COST-OF-LIVING ADJUSTMENT

Geographic Area	Income	Adjusted Income
New England	$30,025	$24,825
Middle Atlantic	26,725*	25,200
South Atlantic	23,975	23,975
East South Central	20,900*	22,000*
West South Central	22,625	23,075
East North Central	26,075*	26,325*
West North Central	24,450	25,725
Mountain	24,525	24,775
Pacific	28,875	25,600
Population of Urbanized Area		
Less than 25,000	$22,050	$22,975
25,000-74,999	23,450	24,175
75,000-124,999	23,975	24,475
125,000-199,999	24,525	24,775
200,000-399,999	25,225	25,475
400,000-999,999	26,150	25,625
1 million or more	30,100*	26,875*
NATIONAL AVERAGE	$24,526	$24,526

*Statistically significant difference from the national average.

Source: Center for Business Research, College of Business, Arizona State University, based on 1987 *Sales and Marketing Management* household disposable income figures and 1987 ACCRA cost-of-living figures.

percent less than the national average in the Southeast to 7 percent more in the Great Lakes states.

ARIZONA

Cost of Living

Not many communities in Arizona have participated in the ACCRA living-cost study. A complete list of cities for which living-cost information is available is presented in Table 3. Some surveys were done by the Center (see the November 1986 issue of *Arizona Business*). Within the Phoenix metropolitan area, where living costs are slightly lower than expected for an urban area of its size, Chandler and Tempe — each of whom participated for the first time in 1987 — have living costs roughly equal to those of Phoenix. By category, however, some differences are apparent: costs in Tempe and Chandler are higher for housing and transportation, but lower for health care and miscellaneous. Costs in Scottsdale are higher than those in Phoenix, especially for housing and utilities.

Because of its smaller population, Tucson's costs are lower than those of Phoenix, and about equal to the national average for an area of its size. The costs of living in non-urban areas of Arizona are much higher than expected given their populations. The desert communities of Casa Grande, Lake Havasu City and Yuma have comparable living costs; although lower than in Phoenix, they are equal to those in Tucson. The northern communities of Page and Show Low, however, have costs of living higher than in the Phoenix metropolitan area.

Income and Adjusted Income

Incomes throughout the state are lower than the national average for comparably sized areas—by as much as 20 percent in the Tucson area and some rural counties, such as Mohave.

Adjusting the Phoenix area incomes by the cost of living produces standard of living figures near the national average for large urban areas (see Tables 2 and 4). In the rest of the state, however, living standards are considerably below national norms; by about 20 percent in the Tucson area and 10 to 25 percent in rural communities.

– Tom R. Rex
Research Manager

TABLE 3
COMPARATIVE LIVING COSTS FOR ARIZONA COMMUNITIES
Percent Difference from City of Phoenix

	Overall	*Groceries*	*Housing*	*Utilities*	*Transportation*	*Health Care*	*Miscellaneous*
Chandler	-1	+1	+3	0	+6	-15	-8
Scottsdale	+9	+3	+19	+30	+6	0	0
Tempe	0	-1	+8	+2	+2	-5	-6
Tucson	-4	0	-3	-20	-3	-11	-2
Casa Grande	-4	+3	-15	+2	+6	-14	-4
Lake Havasu	-6	+4	-21	+15	-9	-19	-4
Yuma	-5	+4	-21	+12	-4	-15	-1
Page	+4	+21	-3	-1	+5	-3	+2
Show Low	+5	+15	-1	+5	+13	+4	+2

Source: Center For Business Research, College of Business, Arizona State University from Center surveys and *ACCRA Intercity Cost of Living Index*, various issues.

TABLE 4
INCOME, COST OF LIVING, AND STANDARD OF LIVING FOR ARIZONA COMMUNITIES

	1987 Income*			1987 Adjusted Income	
	County	*City*	*Cost of Living*	*County***	*City*
Chandler	$27,403	NA	104	$26,350	NA
Phoenix	27,403	26,863	105	26,100	25,575
Scottsdale	27,403	34,288	114	24,025	30,075
Tempe	27,403	30,685	105	26,100	29,225
Tucson	21,935	19,790	101	21,725	19,600
Casa Grande	19,675	NA	101	19,475	NA
Lake Havasu	17,538	NA	99	17,725	NA
Yuma	18,724	20,681	100	18,725	20,675
Page	22,930	NA	109	21,025	NA
Show Low	21,931	NA	110	19,925	NA

*Both county and city income levels are reported since separate city figures were not available for some communities.

**County income divided by city's cost-of-living index

NA– Not available

Source: Center for Business Research, College of Business, Arizona State University based on 1987 *Sales and Marketing Management* household disposable income figures and ACCRA cost-of-living figures.

Economic Weakness Deepened in July

The economic slowdown, which began in February and spread during the spring throughout the economy and the state, continued in July. All regions of the state suffered. Preliminary data for August suggest further weakness, though slight gains may have occurred.

The coincident economic index for the Phoenix area declined in July for the second straight month (see Figure I), dipping 0.2 percent to 147.8 (1982 = 100). The index for the Tucson area fell for the third time in four months, dropping 0.5 percent to 136.9. In rural Arizona the slowdown was more severe, with a 1.3 percent plunge in July to 127.9, following three successive monthly declines.

Despite the decreases in recent months, the coincident indexes remained 2 to 3 percent higher than they were in July 1987. However, this annual change has been falling fast. Another measure of annual growth comparing the latest month to the average of the 12 prior months exhibited even greater weakness. In Pima and Maricopa counties, this rate was at its lowest level since the end of the 1981-82 recession (0.5 percent in the Tucson area, 2.6 percent in the Phoenix area). The rate was –0.9 percent for non-metropolitan Arizona, not as low as it was during 1985.

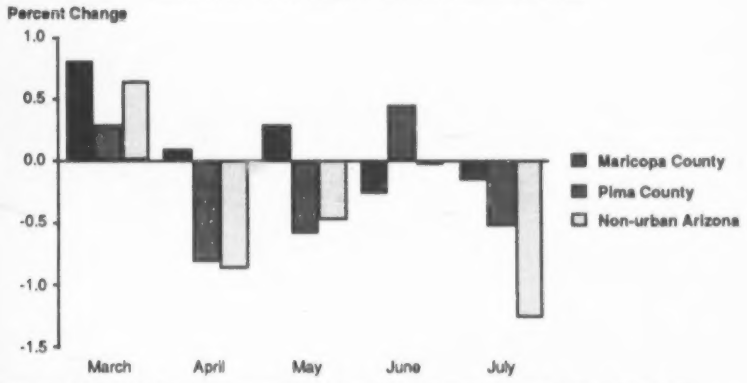
Retail sales were flat to slightly down in July in each of the three areas. The value of commercial building permits plunged in each area, reaching levels near the lows of early 1988.

The employment variables were responsible for the differences in the magnitude of the declines across areas. The unemployment rate rose sharply in all areas, but the largest increase occurred in rural Arizona and the smallest in Maricopa County. Employment rose moderately in the Phoenix area and by a smaller amount in the Tucson area, but declined in the rural counties.

Between April and July, the cumulative change in each component of the index was negative in every geographic area, with the exception of a minimal increase in employment in Maricopa County.

The composite statewide measure declined 0.4 percent in July, dropping the index to 142.5.

FIGURE I
MONTHLY CHANGE IN COINCIDENT INDEXES



Source: Center for Business Research, College of Business, Arizona State University.

– Tom R. Rex
Research Manager

September Purchasing Indicators Track Slowing Growth

The growth rate of the Arizona economy slowed noticeably in September. While order books continued to expand, the increase rate was the smallest in almost two years. Growth in employment also slowed, as did the stretch-out in vendor lead times. Two positive signs were the decline in purchased material inventory and the drop in the rate of price increases to its lowest level since the first quarter.

Twenty-one percent of Arizona's firms added to inventory in September, but a larger 28 percent cut stocks, the third net decline in inventory this year. Purchases of materials and supplies by Arizona firms increased again, but at a somewhat slower rate than in August.

The actions of the Federal Reserve to increase interest rates in an effort to keep the economy from heating up to an unsustainable level seem to be working. If the efforts to curtail inflation continue to meet with success, the economy will enjoy further moderate, but predictable, growth.

TABLE 1
SEPTEMBER PURCHASING SURVEY

Key Indicators	Percent of Purchasing Managers Indicating Each Response (September compared to August) Higher	Same	Lower
Price paid for major commodities	48	50	2
Delivery time from vendors	34	57	9
Purchased materials inventory level	21	51	28
New orders received	35	40	25
Production	35	51	14
Employment	27	55	18
Purchases	38	38	24

Source: Purchasing Management Association of Arizona, Purchasing Management Association of Southern Arizona, and the Northern Arizona Group.

– Harold Fearon

Dr. Fearon is the National Association of Purchasing Management Professor in the ASU College of Business.

Arizona Leading Index Up Again in August

The Arizona Index of Leading Economic Indicators advanced to 111.4 in August, up 0.3 percent from the July level of 111.1 (1977 = 100). The August value for the Index represents a new high, breaking the previous record of 111.2 set just before the stock market decline of October, 1987.

The greatest positive influence on the index came from a seasonally adjusted increase in residential building permits. Hours worked in Arizona manufacturing plants, industrial employment, delivery times, and sensitive prices, a national variable, also influenced the index in a positive direction.

A decrease in the national money supply exerted the greatest downward pull on the index. Seasonally adjusted Arizona production, inventories and orders also created a drag on the index.

RECENT MOVEMENT

The index has exhibited no brisk movement in either direction since the beginning of the year. There have been no sharp decreases of the type associated with recession. Nor have there been extended periods of strong gains. The greatest single advance in 1988 was the .5 percent increase of March, followed by a month of no change in April. Since April, however, the index has increased four consecutive months, but by very small amounts.

Three variables are of particular interest during 1988. Two of these, the national money supply and sensitive materials prices, reflect the strength in the US economy. The money supply increased steadily through the first half of 1988, buoying the index, as the monetary authorities supplied reserves to support the continued expansion of the national economy. As the overall economy continued to heat up, sensitive materials prices increased in every month since February. Money supply decreases in the past two months have undoubtedly been partially aimed at cooling these inflationary tendencies developing at the national level.

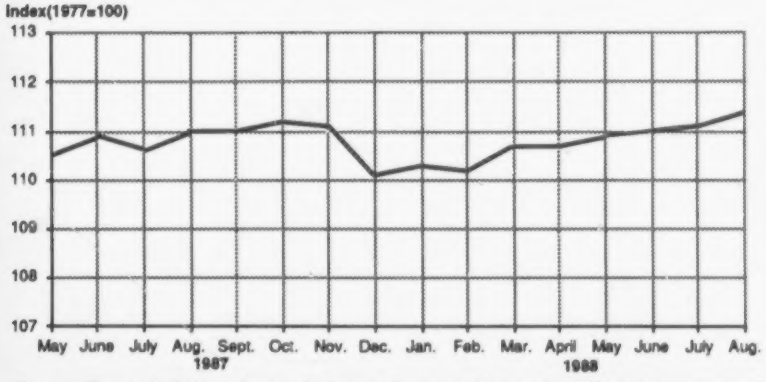
The third variable, residential building permits, is closely watched by analysts because of its typically large contribution to the index. This month, new permits registered their largest impact of the year, 0.39. Much of the strength of this component is from multifamily permits, still relatively strong so far this year in spite of record vacancy rates.

OUTLOOK

Signals from the index have been similar for the past several months. There is no significant change of economic pace in sight for the remainder of 1988 and the early portion of 1989. Arizona's economy is in low gear, moving forward and still on the right road, but at a speed of expansion much slower than that of just a few years ago.

– **Lee R. McPheters,** *Director*
Economic Outlook Center

FIGURE I
ARIZONA INDEX OF LEADING ECONOMIC INDICATORS



Source: Economic Outlook Center, College of Business, Arizona State University; sponsored by Citibank (Arizona).

TABLE 1
NET CONTRIBUTION OF INDIVIDUAL COMPONENTS TO THE ARIZONA INDEX OF LEADING ECONOMIC INDICATORS

	Net Contribution*			
	May	*June*	*July*	*Aug.*
Delivery Time**	.06	–.13	.13	.02
Inventory Levels**	–.06	–.06	.17	–.06
New Orders**	–.07	.01	.06	–.02
Production**	.04	.03	.01	–.06
Employment**	.04	–.05	.05	.05
Residential Building Permits	.36	.03	–.23	.39
Unemployment Insurance Claims	–.23	.19	.00	.00
Average Workweek, Manufacturing	.05	–.09	–.05	.05
Money Supply	.02	.06	–.05	–.10
Change in Sensitive Materials Prices	.02	.03	.02	.01
OVERALL INDEX CHANGE (%)	.25	.01	.13	.27

*The net contribution of each component is calculated by multiplying the monthly percent change in its index by its relative importance.

**Based on indicators from the purchasing management associations of Arizona and southern Arizona.

Source: Economic Outlook Center, College of Business, Arizona State University; sponsored by Citibank (Arizona).

The Arizona leading index is based on 10 economic indicators, combined and weighted to project the pace of economic activity several months ahead. Five of the components come from a monthly survey of Arizona purchasing managers conducted by Dr. Harold Fearon. The Arizona Index of Leading Economic Indicators is sponsored by Citibank (Arizona).

ARIZONA ECONOMIC INDICATORS

	Month or Quarter	Value	Percent Change from Previous Period	Percent Change from Year Ago	Year-to-Date Value	Year-to-Date Percent Change from Year Ago
GROSS STATE PRODUCT (In Billions of Dollars, at Annual Rate)						
Arizona - Current Dollars	1st Qtr.	89.443	2.0	9.0	NA	NA
Arizona - 1982 Dollars	1st Qtr.	49.003	1.5	4.8	NA	NA
COINCIDENT ECONOMIC INDEXES (1982 = 100)						
Arizona	July	142.5	-0.3	2.9	NA	NA
Metropolitan Phoenix	July	147.8	-0.2	3.1	NA	NA
Metropolitan Tucson	July	136.9	-0.5	2.3	NA	NA
Non-urban Arizona	July	127.9	-1.2	2.7	NA	NA
CONSUMER PRICE INDEX (1982-84 = 100)						
Metropolitan Phoenix	3rd Qtr.	120.9	2.1	3.8	NA	NA
INDEX OF LEADING ECONOMIC INDICATORS (1977 = 100)						
Arizona	August	111.4	0.3	0.4	NA	NA
BUILDING PERMITS (Total Dollar Value in Thousands)						
Maricopa County	July	233,904	-26	-35	1,999,989	-14
Pima County	July	32,428	-36	-38	306,099	-16
Balance of State	July	51,428	-30	-12	407,039	1
Arizona	July	317,756	-28	-32	2,713,127	-12
TOTAL HOUSING UNITS AUTHORIZED						
Maricopa County	July	1,553	-42	-43	13,883	-19
Pima County	July	237	-62	-51	3,544	-14
Balance of State	July	605	-36	-22	5,661	-12
Arizona	July	2,395	-43	-40	23,008	-17
HOME SALES						
Maricopa County - Number	August	5,150	8	-17	34,475	-20
Maricopa County - Median Price	August	80,850	0	-1	80,025	0
HOUSING AFFORDABILITY INDEXES						
Metropolitan Phoenix - New Homes	2nd Qtr.	96	5.5	1.1	NA	NA
Metropolitan Phoenix - Resale Homes	2nd Qtr.	124	0.8	6.9	NA	NA
MORTGAGE INTEREST RATES (Conventional, 30-year, Fixed-rate)						
Maricopa County	September	10.4	-1.9	-3.7	NA	NA
POPULATION ESTIMATES (In Thousands)						
Maricopa County	2nd Qtr.	2,013	0.3	2.2	NA	NA
Arizona	2nd Qtr.	3,476	0.3	2.1	NA	NA
ELECTRICAL POWER SALES (In Millions of Kilowatt Hours)						
Arizona	August	4,831	1.3	21.3	29,684	12.4

NA = Not Applicable

Source: Center for Business Research, College of Business, Arizona State University.

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